



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,169	02/02/2004	Alessandro Trequattrini	1008788-000057	5775

21839 7590 02/03/2011
BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

LUONG, PETER

ART UNIT	PAPER NUMBER
----------	--------------

3777

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

02/03/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com
offserv@bipc.com

Office Action Summary	Application No. 10/768,169	Applicant(s) TREQUATTRINI ET AL.	
	Examiner Peter Luong	Art Unit 3777	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,10-22,24-30 and 32-151 is/are pending in the application.
- 4a) Of the above claim(s) 55-60,83-88 and 119-138 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,10-22,24-30,32-54,61-82,89-118 and 139-151 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/19/2010 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 10-14, 17-19, 21, 33-37, 41-43, 61-66, 75-76, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damadian et al. (US 6,414,490) in view of Eckels et al. (US 6,011,396).

4. The patent of Damadian et al. discloses a magnetic resonance imaging apparatus comprising a magnetic structure (9) having two opposite and spaced apart poles (12) and a column or wall transverse to the poles and connecting the poles (10); the poles define two opposite walls delimiting a patient-imaging space, the two opposite walls extending along substantially parallel planes which are substantially parallel to a vertical plane (Fig. 2); and a patient positioning table which is slidably connected to a

Art Unit: 3777

supporting frame between the two poles (Fig. 4); the table being positioned with its longitudinal axis substantially parallel to the two opposite parallel walls of the poles and the table being oriented with its transverse axis substantially perpendicular to at least one of the two opposite walls (Fig. 3); the table being slidable with respect to the magnet in a direction parallel to a longitudinal axis of the table (Figs. 3 and 11); manual or automatic means being provided for displacing the table relative to the magnetic structure along the longitudinal axis (34); a lock for locking the table in a selected position relative to the magnetic structure (40); and manual or automatic means being provided for rotating the frame about the axis (40). Damadian et al. does not teach wherein the poles or the entire magnetic structure being rotatable together from a horizontal table position to a vertical table position. However, Eckels et al. teaches in an adjustable MRI imaging system wherein the magnet assembly can be rotated around the patient (Fig. 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the magnet to be rotatable around the patient as taught by Eckels et al. to allow for adjustable positioning of the magnet. Damadian et al. discloses the subject matter substantially as claimed except for the table supporting frame is supported by the magnetic structure. However, an integration of parts is well within the skill level of one of ordinary skill in the art (In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965)). It is well known in magnetic resonance imaging for the table supporting frame and the magnetic structure to be connected. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the table supporting frame and the

Art Unit: 3777

magnetic structure. Damadian et al. does not teach wherein the axis of rotation coincides with the central axis of the poles, however, it would have been an obvious modification to align the rotational axis of the table and magnet with the poles as a rearrangement of parts is well within the skill level of one of ordinary skill in the art.

5. Claims 15-16 and 38-40, 67-72, and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damadian et al. (US 6,414,490) in view of Eckels et al. (US 6,011,396).as applied to claim 1 above, and further in view of Damadian et al. (US 6,023,165).

6. Damadian et al. discloses the subject matter substantially as claimed except for rotating the table along its longitudinal axis. However, Damadian et al. ('165) teaches in an MRI apparatus which rotates the table horizontally and vertically and which rotates the table along its longitudinal axis (Fig. 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided Damadian et al. ('490) with the table rotatable along its longitudinal axis as taught by Damadian et al. ('165) in order to obtain images of the patient at different positions.

Damadian et al. discloses the subject matter substantially as claimed except for a U-shaped frame. However, a change in shape is well within the skill level of one of ordinary skill in the art (In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the frame as a matter of design choice.

Art Unit: 3777

7. Claims 15-16 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damadian et al. (US 6,414,490) in view of Eckels et al. (US 6,011,396) as applied to claim 14 above, and further in view of Damadian et al. (US 6,934,574).

8. Damadian et al. discloses the subject matter substantially as claimed except for the angular positions of the table. However, Damadian et al. ('574) teaches a MRI scanner comprising a patient support (Fig. 3) capable of being adjusted to a number of angles and positions. Therefore, it would have been obvious to one of ordinary skill in the art to have modified the patient support structure of Damadian ('490) with the adjustable positions of Damadian ('574) in order to obtain images of the patient in multiple positions.

9. Claims 20, 22, 24-30, 32, 44-54, 73-76, and 78-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damadian et al. (US 6,414,490) in view of Eckels et al. (US 6,011,396).as applied to claims 1 or 14 above, and further in view of Carter et al. (US 6,860,272).

10. Damadian et al. discloses the subject matter substantially as claimed except for a guiding means to slide the footrest or seat. However, Carter et al. teaches a means for sliding the footrest in an MRI apparatus (Fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the means for sliding the footrest as taught by Carter et al. in order to adjust the location of the footrest. With respect to the seat, it would have been obvious to one of ordinary skill

Art Unit: 3777

in the art at the time the invention was made to have provided the same means to allow adjustment of the seat.

11. Damadian et al. discloses the subject matter substantially as claimed except for a means for retaining the patient. However, Carter et al. teaches in an MRI apparatus means for retaining a patient including removable fastening belts (Fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the apparatus of Damadian with the patient retention means as taught by Carter et al. in order to keep the patient in place. With respect to the armpit support, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided an armpit support as an addition means of support for the arms as Damadian et al. teaches an arm support (48).

12. With respect to claims 32 and 54, Damadian et al. teaches the subject matter substantially as claimed except for a locking means for the patient retaining means, the footrest, and the seat. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided those parts with a locking mechanism in order to keep the positions of those parts in place to avoid patient movement during examination.

13. Claims 1-2, 10-22, 24-30, 32-54, 61-82, 89-118, and 139-151 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damadian et al. (US 6,023,165, US 6,414,490, and US 6,934,574), Eckels et al. (US 6,011,396), and Carter et al. (US 6,860,272).

14. The combination of Damadian et al. ('165, '490, '574), Eckels et al., and Carter et al. discloses the subject matter of the system capable of performing the various positions of the patient and locking of the patient supports (see combinations above). Therefore, the subject matter of which inherently discloses the method steps as claimed.

Response to Arguments

Applicant's arguments filed 1/19/2010 have been fully considered but they are not persuasive.

Applicant argues that Damadian et al. does not teach wherein the entire magnetic structure is supported rotatably together with the table support frame around the same axis, wherein the axis of rotation of the table supporting frame and of at least the poles of the magnetic structure substantially coincides with a central axis of the poles. However, the Examiner respectfully disagrees with the applicant. Applicant has failed to disclose that a single structure vs. two structures performing the same functions or aligning the axes provides for an advantage, is used for a particular purpose, or solves a stated problem. The Examiner's position is that it is obvious to one of ordinary skill in the art to integrate the two structures into one, the magnetic structure and the table supporting frame, as combining elements is well within the skill level of one of ordinary skill in the art. The Examiner notes that single structured MRI systems are well known in the art (magnet and sliding table). Furthermore, aligning the axis of rotations is an obvious modification in which one of ordinary skill in the art is capable of doing as a matter of rearrangement of parts.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Luong whose telephone number is (571)270-1609. The examiner can normally be reached on Monday - Friday, 9:30 a.m. - 6:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Chen can be reached on (571) 272-3672. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. L./
Examiner, Art Unit 3777

/Tse Chen/
Supervisory Patent Examiner, Art Unit 3777